

MOAB depends on a set of other libraries that one might have to build first. A typical (although not the minimal) set, which supports parallel MOAB is this: zlib, szip, mpi, hdf5, netcdf.

Building most of these is rather straightforward. Here we document commands that were used to build these libraries on MCS' Cosmea cluster using GNU compilers.

An identical procedure should work on most Linux machines (e.g., a Linux laptop).

We wish to thank Bob Smith who built most of these libraries on Cosmea and whose exhaustive README.txt files were used to carry out these builds and are a basis for this page.

0. Here we assume that all installations go into  $\${HOME\_DIR}$  and bash is the shell being used (adjustments needed to carry this out using csh or tcsh should be obvious).

Any package named *<package>* being installed has its source tree unpacked from a tarball (or cloned from a version-controlled repository) into the *source directory*

$\${HOME\_DIR}/<package>/<package-version.major.minor>/src$ .

The build is carried out in the source directory and the package is installed into the *installation directory*

$\${HOME\_DIR}/<package>/<package-version.major.minor>/<configuration>$ , where *<configuration>* is typically the name of the compiler set used to build the package (e.g., *gcc*).

Occasionally, *<configuration>* also indicates whether a serial or a parallel version of the package is being built (e.g., *parallel/gcc*).

All of the packages described below are built using the standard autotools based *configure; make; make install* sequence or a variation thereof. After the build and installation are completed, all the relevant log files are copied into the *installation directory*. It is a good idea to place a README.txt into the *installation directory* describing the sequence of commands used to carry out the build and install. It is on such README.txt files that this page is based.

1. zlib.